

We claim the following:

1. A device for delivering a desired medium at certain temperature ranges for temperature management of a mammal, comprising:

an inlet source receives the desired medium and directs the desired medium to a temperature-control device;

a bio-feedback device measures the mammal's actual temperature, and transmits the measurement to the temperature-control device;

depending on the measurement, the temperature-control device alters the temperature of the desired medium; and

an outlet source directs the desired medium to manage the temperature of the mammal;

wherein the mammal is to have its temperature set to a predetermined-desired temperature which is entered into the temperature-control device;

wherein when the actual temperature is above the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium to a predetermined differential from the actual temperature; and

wherein when the actual temperature is below the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium to a pre-set differential from the actual temperature.

2. The device of claim 1 wherein the desired medium is water.

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3. The device of claim 1 wherein the desired medium is air.

4. The device of claim 1 wherein the
5 predetermined differential ranges from 0.1 to 35 degrees Celsius below the actual temperature.

5. The device of claim 1 wherein the
predetermined differential ranges from 5 to 15 degrees
10 Celsius below the actual temperature.

6. The device of claim 1 wherein the pre-set differential ranges from 0.1 to 35 degrees Celsius above the actual temperature, so long as the temperature-
15 control device does not alter the temperature of the desired medium above a predetermined-maximum temperature.

7. The device of claim 1 wherein the pre-set
20 differential ranges from 5 to 15 degrees Celsius above the actual temperature.

7. The device of claim 6 wherein the
predetermined-maximum temperature is 0.1 to 10 degrees
25 Celsius above a predetermined-healthy temperature of the mammal.

8. The device of claim 6 wherein the
predetermined-maximum temperature is about 5 degrees
30 Celsius above a predetermined-healthy temperature of the mammal.

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10. A device for delivering a desired medium within a desired temperature range for temperature management of a mammal, comprising:

an inlet source receives the desired medium and
5 directs the desired medium to a temperature-control device;

a bio-feedback device measures the mammal's actual temperature, and transmits the measurement to the temperature-control device;

10 depending on the measurement, the temperature-control device alters the temperature of the desired medium; and

an outlet source directs the desired medium to manage the temperature of the mammal;

15 wherein the mammal has a predetermined-healthy temperature which is entered into the temperature-control device;

wherein when the actual temperature is above the predetermined-healthy temperature, the temperature-
20 control device alters the temperature of the desired medium to a predetermined differential from the actual temperature;

wherein when the actual temperature is below the predetermined-healthy temperature, the temperature-
25 control device alters the temperature of the desired medium to a pre-set differential from the actual temperature; and

wherein when the actual temperature is about the predetermined-healthy temperature, the temperature-
30 control device alters the temperature of the desired medium to maintain the actual temperature.

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~~19~~. The device of claim ¹⁹~~10~~ wherein the pre-selected differential is from 0.01 to 5 degrees Celsius above and below the predetermined-healthy temperature.

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~~20~~. The device of claim 1 wherein the temperature-control device is a heat transfer unit with a temperature-measurement instrument.

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10 ~~21~~. The device of claim ¹⁹~~10~~ wherein the temperature-control device is a heat transfer unit with a temperature-measurement instrument.

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15 ~~22~~. The device of claim 1 wherein the outlet source directs the desired medium into a blanket.

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20 ~~23~~. The device of claim ¹⁹~~10~~ wherein the outlet source directs the desired medium into a blanket.

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25 ~~24~~. The device of claim ¹¹~~22~~ wherein the blanket has a plurality of channels.

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30 ~~25~~. The device of claim ³⁰~~23~~ wherein the blanket has a plurality of channels.

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35 ~~26~~. The device of claim ¹¹~~22~~ wherein the blanket has a plurality of apertures directing the desired medium in the direction of the mammal.

³²
40 ~~27~~. The device of claim ³⁰~~23~~ wherein the blanket has a plurality of apertures directing the desired medium in the direction of the mammal.

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28. The device of claim 1 wherein the outlet source directs the desired medium under a blanket.

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29. The device of claim ¹⁹10 wherein the outlet source directs the desired medium under a blanket.

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30. A method of using a device for delivering a desired medium within a selected temperature range for temperature management of a mammal, comprising following steps:

directing the desired medium into an inlet source and a temperature-control device;

measuring the mammal's actual temperature with a bio-feedback device, and transmitting the measurement to the temperature-control device;

depending on the measurement, altering the temperature of the desired medium with the temperature-control device;

directing the desired medium through an outlet source to manage the temperature of the mammal;

wherein the mammal is to have its temperature adjusted to a predetermined-desired temperature which is entered into the temperature-control device;

wherein when the actual temperature is above the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium to a predetermined differential from the actual temperature; and

wherein when the actual temperature is below the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium to a pre-set differential from the actual temperature.

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31. The method of claim ³⁷~~30~~ wherein the desired medium is water.

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32. The method of claim ³⁷~~30~~ wherein the desired
5 medium is air.

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33. The method of claim ³⁷~~30~~ wherein the predetermined differential ranges from 0.1 to 35 degrees Celsius below the actual temperature.

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34. The method of claim ³⁷~~30~~ wherein the predetermined differential ranges from 5 to 15 degrees Celsius below the actual temperature.

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35. The method of claim ³⁷~~30~~ wherein the pre-set differential ranges from 0.1 to 35 degrees Celsius above the actual temperature, so long as the temperature-control device does not alter the temperature of the desired medium above a predetermined-maximum
20 temperature.

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36. The method of claim ³⁷~~30~~ wherein the pre-set differential ranges from 5 to 15 degrees Celsius above the actual temperature.

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37. The method of claim ⁴²~~35~~ wherein the predetermined-maximum temperature is 0.1 to 10 degrees Celsius above a predetermined-healthy temperature of the mammal.

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38. The method of claim ⁴²~~35~~ wherein the predetermined-maximum temperature is about 5 degrees

Celsius above a predetermined-healthy temperature of the mammal.

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39. The method of claim 37 wherein the pre-
5 selected differential is from 0.01 to 5 degrees Celsius
above and below the predetermined-healthy temperature.

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40. The method of claim 37 wherein the
temperature-control device is a heat transfer unit with
10 a temperature-measurement instrument.

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41. The method of claim 37 wherein the outlet
source directs the desired medium into a blanket.

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42. The method of claim 48 wherein the blanket has
15 a plurality of channels.

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43. The method of claim 48 wherein the blanket has
a plurality of apertures directing the desired medium in
20 the direction of the mammal.

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44. The method of claim 37 wherein the outlet
source directs the desired medium under a blanket.

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45. The device of claim 19 wherein the outlet
25 source directs the desired medium to a mattress.

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46. The device of claim 1 wherein the outlet
source directs the desired medium to a mattress.

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47. The method of claim 37 wherein the outlet
30 source directs the desired medium to a mattress.

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48. The device of claim 19 wherein the outlet
source directs the desired medium to a mattress pad.

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49. The device of claim 1 wherein the outlet
5 source directs the desired medium to a mattress pad.

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50. The method of claim 37 wherein the outlet
source directs the desired medium to a mattress pad.

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10 51. The device of claim 1 wherein the temperature-
control device can alter the temperature of the desired
medium at a predetermined rate.

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15 52. The device of claim 19 wherein the
temperature-control device can alter the temperature of
the desired medium at a predetermined rate.

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20 53. The method of claim 37 wherein the
temperature-control device can alter the temperature of
the desired medium at a predetermined rate.

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25 54. A device for delivering a desired medium at
certain temperature ranges for temperature management of
a mammal, comprising:

an inlet source receives the desired medium and
directs the desired medium to a temperature-control
device;

a bio-feedback device measures the mammal's actual
temperature, and transmits the measurement to the
30 temperature-control device;

depending on the measurement, the temperature-
control device alters the temperature of the desired
medium; and

an outlet source directs the desired medium to manage the temperature of the mammal;

wherein the mammal is to have its temperature set to a predetermined-desired temperature which is entered
5 into the temperature-control device;

wherein when the actual temperature is above the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium at a predetermined rate; and

10 wherein when the actual temperature is below the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium at a predetermined rate.

15 ⁵⁷~~55~~. The device of claim ⁵⁶~~54~~ wherein the desired medium is water.

⁵⁸~~56~~. The device of claim ⁵⁶~~54~~ wherein the desired medium is air.

20 ⁵⁹~~57~~. The device of claim ⁵⁶~~54~~ wherein the predetermined differential ranges from 0.1 to 35 degrees Celsius below the actual temperature.

25 ⁶⁰~~58~~. The device of claim ⁵⁶~~54~~ wherein the predetermined differential ranges from 5 to 15 degrees Celsius below the actual temperature.

30 ⁶¹~~59~~. The device of claim ⁵⁶~~54~~ wherein the pre-set differential ranges from 0.1 to 35 degrees Celsius above the actual temperature, so long as the temperature-control device does not alter the temperature of the

desired medium above a predetermined-maximum temperature.

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~~60~~. The device of claim ⁵⁶~~54~~ wherein the pre-set
5 differential ranges from 5 to 15 degrees Celsius above
the actual temperature.

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~~61~~. The device of claim ⁶¹~~59~~ wherein the
predetermined-maximum temperature is 0.1 to 10 degrees
10 Celsius above a predetermined-healthy temperature of the
mammal.

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~~62~~. The device of claim ⁶¹~~59~~ wherein the
predetermined-maximum temperature is about 5 degrees
15 Celsius above a predetermined-healthy temperature of the
mammal.

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~~63~~. The device of claim ⁵⁶~~54~~ wherein the
temperature-control device alters the temperature of the
20 desired medium to a pre-set differential from the actual
temperature.

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~~64~~. A device for delivering a desired medium at
certain temperature ranges for temperature management of
25 a mammal, comprising:

an inlet source receives the desired medium and
directs the desired medium to a temperature-control
device;

a bio-feedback device measures the mammal's actual
30 temperature, and transmits the measurement to the
temperature-control device;

depending on the measurement, the temperature-control device alters the temperature of the desired medium; and

an outlet source directs the desired medium to
5 manage the temperature of the mammal;

wherein the mammal is to have its temperature set to a predetermined-desired temperature which is entered into the temperature-control device;

wherein when the actual temperature is above the
10 predetermined-desired temperature, the temperature-control device alters the temperature of the mammal at a predetermined rate; and

wherein when the actual temperature is below the predetermined-desired temperature, the temperature-control device alters the temperature of the mammal at a
15 predetermined rate.

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65. The device of claim ⁷³64 wherein the desired medium is water.

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66. The device of claim ⁷³64 wherein the desired medium is air.

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25 67. The device of claim ⁷³64 wherein the predetermined rate ranges from 0.1 to 25 degrees Celsius per hour.

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30 68. The device of claim ⁷³64 wherein the predetermined rate ranges from 1 to 15 degrees Celsius per hour.

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69. The device of claim ⁷³64 wherein the temperature-control device is a heat transfer unit with a temperature-measurement instrument.

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70. The device of claim ⁷³64 wherein the outlet source directs the desired medium into a blanket.

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71. The device of claim ⁷⁸69 wherein the predetermined-maximum temperature is 0.1 to 10 degrees
10 Celsius above a predetermined-healthy temperature of the mammal.

⁸⁰
72. The device of claim ⁷⁸69 wherein the predetermined-maximum temperature is about 5 degrees
15 Celsius above a predetermined-healthy temperature of the mammal.

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73. The device of claim ⁷³64 wherein the temperature-control device alters the temperature of the
20 desired medium to a pre-set differential from the actual temperature.

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74. The device of claim 1 wherein the predetermined-desired temperature is selected from the
25 group consisting of a temperature below the mammal's normal temperature, the mammal's normal temperature, and a temperature above the mammal's normal temperature.

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75. The device of claim ⁷³64 wherein the predetermined-desired temperature is selected from the
30 group consisting of a temperature below the mammal's normal temperature, the mammal's normal temperature, and a temperature above the mammal's normal temperature.

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76. The method of claim 30 wherein the
predetermined-desired temperature is selected from the
group consisting of a temperature below the mammal's
normal temperature, the mammal's normal temperature, and
5 a temperature above the mammal's normal temperature.

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77. The device of claim 73 wherein the blanket has
a plurality of channels.

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10 78. The device of claim 73 wherein the blanket has
a plurality of apertures directing the desired medium in
the direction of the mammal.

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15 79. The device of claim 73 wherein the outlet
source directs the desired medium under a blanket.

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80. The device of claim 73 wherein the outlet
source directs the desired medium to a mattress.

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20 81. The device of claim 73 wherein the outlet
source directs the desired medium to a mattress pad.

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25 82. The device of claim 56 wherein the blanket has
a plurality of channels.

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83. The device of claim 56 wherein the blanket has
a plurality of apertures directing the desired medium in
the direction of the mammal.

68
30 84. The device of claim 56 wherein the outlet
source directs the desired medium under a blanket.

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~~85~~. The device of claim ⁵⁶~~54~~ wherein the outlet
source directs the desired medium to a mattress.

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~~86~~. The device of claim ⁵⁶~~54~~ wherein the outlet
5 source directs the desired medium to a mattress pad.

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~~87~~. The device of claim ⁵⁶~~54~~ wherein the
temperature-control device is a heat transfer unit with
a temperature-measurement instrument.

10 ⁷²
~~88~~. The device of claim ⁵⁶~~54~~ wherein the outlet
source directs the desired medium into a blanket.

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